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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,414	02/04/2002	Cornelis Antonie Maria Jaspers	NL 010046	7885
24737	7590	04/25/2005		
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			EXAMINER JERABEK, KELLY L	
			ART UNIT	PAPER NUMBER
			2612	
DATE MAILED: 04/25/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/067,414

Applicant(s)

JASPERS, CORNELIS ANTONIE  
MARIA

Examiner

Kelly L. Jerabek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 2-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/18/2002</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Drawings***

Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1 and 7-10 rejected under 35 U.S.C. 102(e) as being anticipated by Jaspers et al. US 6,697,110.**

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Re claim 1, Jaspers discloses in figure 1A a color filter array of an RGB Bayer image sensor. The array includes a first group of pixels that represent parts of an image having a filter with a first color (G) and a second group of pixels that represent parts of an image having one or more filters with one or more second colors (R,B) (col. 2, lines 1-15). Additionally, each pixel of second group (R,B) has a horizontal and a vertical neighboring pixel of the first group (G). Figure 4 shows the first color information (G1-G4) of all neighboring vertical and horizontal pixels. A pixel (R/B) of the second pixel group is selected and second color information about the one or more second colors (R/B) at the position of the pixel is provided. Jaspers then discloses a smart Green algorithm for interpolating the missing color value at the position of the selected pixel (R/B) by calculating a median value of the first color information (G1-G4) and the second color information (R/B) (col. 3, line 34 – col. 4, line 4, line 35).

Re claims 7-8, Jaspers states that the interpolation technique using a median value can be implemented by means of hardware and by means of a suitably programmed computer (col. 15, lines 8-13).

Re claims 9-10, see claim 1.

***Allowable Subject Matter***

Claims 2-6 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fail to anticipate or render obvious the following technical features as recited in the highlighted claims:

Referring to claims 2-6, the prior art fails to teach or suggest "...in case the edge has an angle to the vertical line being different from 90 degrees: determining a horizontal average value of the horizontal neighboring pixels, determining a vertical average value of the vertically neighboring pixel, calculating a median value using the determined horizontal average value, the determined vertical average value and the

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second color information at the position of the selected pixel, and in case the edge has an angle to the vertical line substantially equal to 90 degrees: calculating the median value of the individual first color informations and the second color information.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cok (US 4,630,307) discloses a signal processing method and apparatus for sampled image signals. The information regarding median color interpolation and edge detection is relevant material.

Acharya (US 6,269,181) discloses an algorithm for color recovery from 8-bit to 24-bit color pixels. The information regarding median color interpolation is relevant material.

Lu et al. (US 5,805,217) discloses a method and system for interpolating missing picture elements in a single color component array obtained from a single color sensor. The information regarding median color interpolation is relevant material.

Acharya et al. (US 6,229,578) discloses an edge-detection based noise removal algorithm. The information regarding median color interpolation and edge detection is relevant material.

Aoki et al. (US 6,628,327) discloses a method and system for improving resolution in color image data generated by a color image sensor. The information regarding median color interpolation is relevant material.

Tabei et al. (US 5,805,216) discloses a defective pixel correction circuit. The information regarding interpolation based on edge detection is relevant material.

Jaspers (US 6,727,945) discloses color signal interpolation. The information regarding interpolation of color signals is relevant material.

Hamilton, Jr. et al. (US 5,631,703) discloses a particular pattern of pixels for a color filter array that is used to derive luminance and chrominance values. The information regarding interpolating color signals is relevant material.

Kawamura et al. (US 6,563,537) discloses image signal interpolation. The information regarding interpolation based on edge detection is relevant material.

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Martin (US 6,549,233) discloses a color interpolation system. The information regarding interpolating color signals is relevant material.

Addison (US 5,990,950) discloses a method and system for color filter array multifactor interpolation. The information regarding interpolating color signals is relevant material.

### ***Contacts***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is **(571) 272-7312**. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on **(571) 272-7308**. The fax phone number for submitting all Official communications is 703-872-9306. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at **(571) 273-7312**.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ

  
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